



# **Analysis of Greyhound Racing Injuries**

## **1 January 2020 – 31 March 2020**

## Foreword

Each quarter the NSW Greyhound Welfare & Integrity Commission (the Commission) publishes a report providing data in relation to injuries that have been sustained by greyhounds while racing in NSW. The publication of such data has occurred in NSW since 2016 and is designed to provide transparent, accurate and timely reporting of racing related injuries.

This report contains both quarterly analysis and trend line analysis of racing injury related information and provides an important evidence base to assess current and future strategies to minimise the incidence and severity of greyhound racing related injuries.

Changes to the report's structure and content are sometimes made to enhance the utility of these reports. One such change effected this quarter is to the definition of an injury sustained during racing and therefore included in this report. Previous injury reports included a Minor I category, to describe an abrasion or spike wound or nail injury that was so minor, that no time off racing was recommended or required. Following consultation with industry participants and veterinarians, it is agreed that these are insignificant in health and welfare terms and cannot be reasonably considered injuries, as no rest period or treatment is required. For this and future reports, the Minor category will represent injuries requiring 1-10 days off racing only.

This report relates to the third quarter of the 2019-20 financial year, or first quarter of 2020 on a calendar year basis.

## Key points

During the quarter, the Commission supervised 259 greyhound race meetings consisting of 2,596 races and 18,625 greyhound starts. A total of 3,673 individual greyhounds started in races over this period, with an average of 5.07 starts per greyhound.

The number of greyhounds found to have sustained an injury was 550, amounting to 2.95% of all greyhound starts or a total injury rate per 1,000 starts of 29.5. This is the lowest total injury rate reported since Q1 2017.

Most injuries, some 425 or 77%, were classified as minor or medium, requiring incapacitation periods of 1 to 21 days.

The number of greyhounds that suffered a catastrophic injury resulting in euthanasia or death was 15, representing a rate per 1,000 starts of 0.8, which compares favourably with Q1 2019 and Q1 2018 which both had a catastrophic injury rate of 1.9 per 1,000 starts.

## Data sources and Injury classification

This report is prepared by the Commission's Chief Veterinary Officer and details greyhound injuries and fatalities that occurred at race meetings in New South Wales for the respective reporting period.

The information is compiled from data recorded by the Commission's On-Track Veterinarians (OTVs) using the Greyhound Examination Database (GED) managed by the Faculty of Engineering and Information Technology at the University of Technology Sydney (UTS).

The data captured by OTVs and input into the GED includes a description of the greyhound; the track; the race distance; the box and race number; the anatomical location and nature of the injury; the incapacitation time applied; the apparent location on the track where the incident that resulted in the injury occurred; and all treatment information. This information also contributes to ongoing research being conducted by UTS into greyhound racing track design, safety and injury prevention.

Data on the number of race meetings and race starts is drawn from the Commission’s business systems (including OzChase and OneGov).

All greyhounds that present at a race meeting are subject to a pre-race veterinary examination by the OTV.

In a post-race context, the OTV undertakes examination of some greyhounds for a variety of reasons including:

- at the request of a steward due to suboptimal or inexplicable performance
- a racing incident (for example, a race collision or race fall or a marring incident)
- where a greyhound fails to finish a race
- at a trainer’s request; and/or
- initiated by the OTV.

All greyhounds injured at the racetrack receive immediate veterinary treatment from an OTV. Trainers may be directed by the OTV to seek follow-up treatment for a greyhound from a veterinarian in private practice.

## Injury classification methodology

Injuries are classified according to the number of days ‘incapacitation’ or stand-down from racing required to recover from the injury diagnosed at the time of the examination by the OTV. The injury classification now used by the Commission’s OTVs is detailed in Table 1.

As outlined in the Foreword, this quarter’s report reflects a change in the reporting of minor injuries, by excluding injuries, that, notwithstanding examination at the track by an OTV, were so minor that no time off from racing was required. These incidents were previously reported as Minor I, with injuries requiring time off between 1 to 10 days classified as Minor II. From here on only injuries requiring an incapacitation period of at least one day will be reported, with the classification of Minor injuries defined as any injury requiring an incapacitation period of between 1-10 days.

**Table 1: Injury classification and examples of injuries**

<b>Injury category</b>	<b>Incapacitation period (days)</b>	<b>Example of injury</b>
Minor*	1-10	Minor cuts, abrasions, pad injuries, Grade 1 muscle injuries requiring treatment.
Medium	14-21	Moderate cuts and pad/toe injuries, joint sprains, ligament or tendon injuries, Grade 2 muscle injuries.
Major I	28-42	Fractured toes, severe split pads, dislocated joints, simple fractures, Grade 3 muscle injuries.
Major II	43-90	Long bone fractures; severe spinal, pelvic or skull injuries; major fracture dislocations, Achilles tendon ruptures.
Catastrophic		Euthanased or sudden death.

\*Formerly named Minor II

## Counting methodology

Where an individual greyhound sustains injuries in more than one injury category, only the highest category is used in reporting.

Injury rates are reported both as injuries per 100 greyhounds raced (where each greyhound will be counted only once irrespective of how many times it raced), and injuries per 1,000 starts (where a greyhound is counted every time it races within the quarter).

## Causative factor analysis

There are many causes of injuries in racing greyhounds and the relative importance and interactions of causative factors vary. Causative factors can be divided into:

1. Greyhound factors: genetics, nutrition, physical growth and development, fitness, race preparation and previous injury history
2. Track factors: design and surface characteristics
3. Race factors: race distance, racing incidents and number of greyhounds in a race.

The causal factors for major and catastrophic race injuries are examined by the Commission's Race Injury Review Panel. A separate report is produced in relation to the findings of the Race Injury Review Panel and is published at [www.gwic.nsw.gov.au](http://www.gwic.nsw.gov.au).

## Race injury prevention strategies

The Commission is committed to reducing the incidence and severity of greyhound injuries and eliminating the unnecessary euthanasia of injured greyhounds.

Various policies, programs and other measures are in place or will be progressively introduced to deliver this outcome including:

- the analyses of all catastrophic and Major II injuries in racing greyhounds by the Race Injury Review Panel;
- obtaining advice from the Greyhound Industry Animal Welfare Committee into greyhound injuries and their causes;
- agreement through the greyhound industry Measurement and Reporting Working Group to compile a comprehensive data set, in conjunction with GRNSW, for multi-factorial analysis of injury causes and correlations; and
- working with Greyhound Racing NSW on track safety reform projects in conjunction with safety experts including from the University of Technology Sydney (UTS) in order to improve understanding of the track-related aspects of racing injuries.

The Commission will continue to advocate for priority attention to be given to those tracks that are above the average in relation to rates of Major II or Catastrophic injuries where track and race factors are thought to be the most significant factors contributing to serious injuries.

## Injuries this quarter

Injuries reported during this quarter are shown in Table 2.

In addition to the reporting methodology for Minor injuries explained above, this reporting period also reflects, albeit for a short period of time at the end of the reporting period, changes to the operation of the racing industry as a result of the COVID-19 pandemic. This has resulted in changes to the programming of race meetings in NSW. For the period 1 January 2020 to 22

March 2020 normal racing program occurred, comprising an average of 21 race meetings, both TAB and non-TAB, per week. From 23 March 2020, changes to racing program occurred as a consequence of the COVID-19 pandemic, including the cancellation of all non-TAB race meetings and the regionalisation of greyhound racing in NSW, with only ten racetracks operating in restricted zones and trainers only allowed to nominate greyhounds to race within their designated zones. The impact of the amended race program for a full quarter will be reported in the next report, for the period 1 April – 30 June 2020.

**Table 2: Injury numbers and rates 1 January – 31 March 2020 (Q1 2020)**

Injury category	Incapacitation period (days)	Number of greyhounds injured	Percentage of greyhounds injured per injury category	Cumulative total per injury category	Injuries per 100 greyhounds raced	Injuries per 1,000 starts
<b>Minor*</b>	1-10	242	44.0%	44.0%	6.6%	13.0
<b>Medium</b>	14-21	183	33.2%	77.2%	5.0%	9.8
<b>Major I</b>	28-42	73	13.2%	90.4%	2.0%	3.9
<b>Major II</b>	43-90	37	6.8%	97.2%	1.0%	2.0
<b>Catastrophic</b>	Euthanased/died	15	2.75%	100%	0.4%	0.8
<b>Total</b>		550	100%	100%	15.0%	29.5

\*Formerly named Minor II

## Injury trends over five quarters

As a result of changes to the classification of minor injuries described above and to enable comparative analysis of previously reported quarterly data, all data for the previous five quarters has been recalibrated to exclude the previously reported category of Minor I injuries (0 days incapacitation). This recalibration has resulted in changes to the overall total of injuries previously reported and the relative proportion of each injury classification to the total of all reported injuries.

The total injury rate in this quarter (29.5 per 1,000 starts) represents a reduction in the total injury rate reported in Q1 2019 (34.1 per 1,000 starts).

When compared with Q1 2019, the Catastrophic injury rate has halved from 1.9 per 1,000 starts to 0.8 for this quarter, and the prior three quarters also reported rates below 0.8 per 1,000 starts. This reduction in the rate of Catastrophic injuries over the past four quarters is believed to be due to a combination of increased awareness by trainers and owners of treatment options for serious injuries available to them; increasing awareness of the Race Injury Treatment Scheme<sup>1</sup>, implemented by GRNSW in March 2019; increased focus on track surface preparation; and the diligent application by all OTVs of the Commission's veterinarian guidelines for the treatment of serious injuries at tracks.

<sup>1</sup> The race injury treatment scheme, administered by GRNSW, provides financial support for the off-track diagnosis and treatment of serious injuries which occur during racing. The scheme is intended to eliminate the euthanasia of injured greyhounds in circumstances where owners may not have the financial capacity to treat serious injuries.

**Table 3: Greyhound injury numbers and rates over 15 months**

Injury category	Quarter 1 2019			Quarter 2 2019			Quarter 3 2019			Quarter 4 2019			Quarter 1 2020		
	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts	Number	Per 100 raced	Per 1000 starts
Minor*	247	6.7%	14.1	303	8.4%	15.0	343	9.1%	16.9	320	8.0%	15.7	<b>242</b>	<b>6.6%</b>	<b>13.0</b>
Medium	207	5.6%	11.8	154	4.3%	7.6	161	4.3%	7.9	233	5.9%	11.4	<b>183</b>	<b>5.0%</b>	<b>9.8</b>
Major I	84	2.3%	4.8	71	2.0%	3.5	76	2.0%	3.7	84	2.1%	4.1	<b>73</b>	<b>2.0%</b>	<b>3.9</b>
Major II	27	0.7%	1.5	41	1.1%	2.0	34	0.3%	1.7	45	1.1%	2.2	<b>37</b>	<b>1.1%</b>	<b>2.0</b>
Catastrophic	33	0.9%	1.9	17	0.5%	0.8	12	0.5%	0.6	15	0.4%	0.7	<b>15</b>	<b>0.4%</b>	<b>0.8</b>
<b>Total</b>	<b>598</b>	<b>16.2%</b>	<b>34.1</b>	<b>586</b>	<b>16.2%</b>	<b>29.1</b>	<b>627</b>	<b>16.6%</b>	<b>30.9</b>	<b>697</b>	<b>17.6%</b>	<b>34.2</b>	<b>550</b>	<b>15.0%</b>	<b>29.5</b>

\*Formerly named Minor II

## Longer term trends

As a result of changes to the classification of minor injuries described above and to enable comparative analysis of previously reported long term trends, all data for the previous fifteen months has been recalibrated to exclude Minor I reported injuries. This recalibration has resulted in changes to the overall totals of injuries previously reported and the relative proportion of each injury classification to the total of all reported injuries.

As shown in Table 3, the first quarter of 2020 demonstrates a decline from the prior quarter in the overall injury rate. Most of the decrease in injuries occurred in the Minor and Medium categories, which incur 21 days or less time off racing.

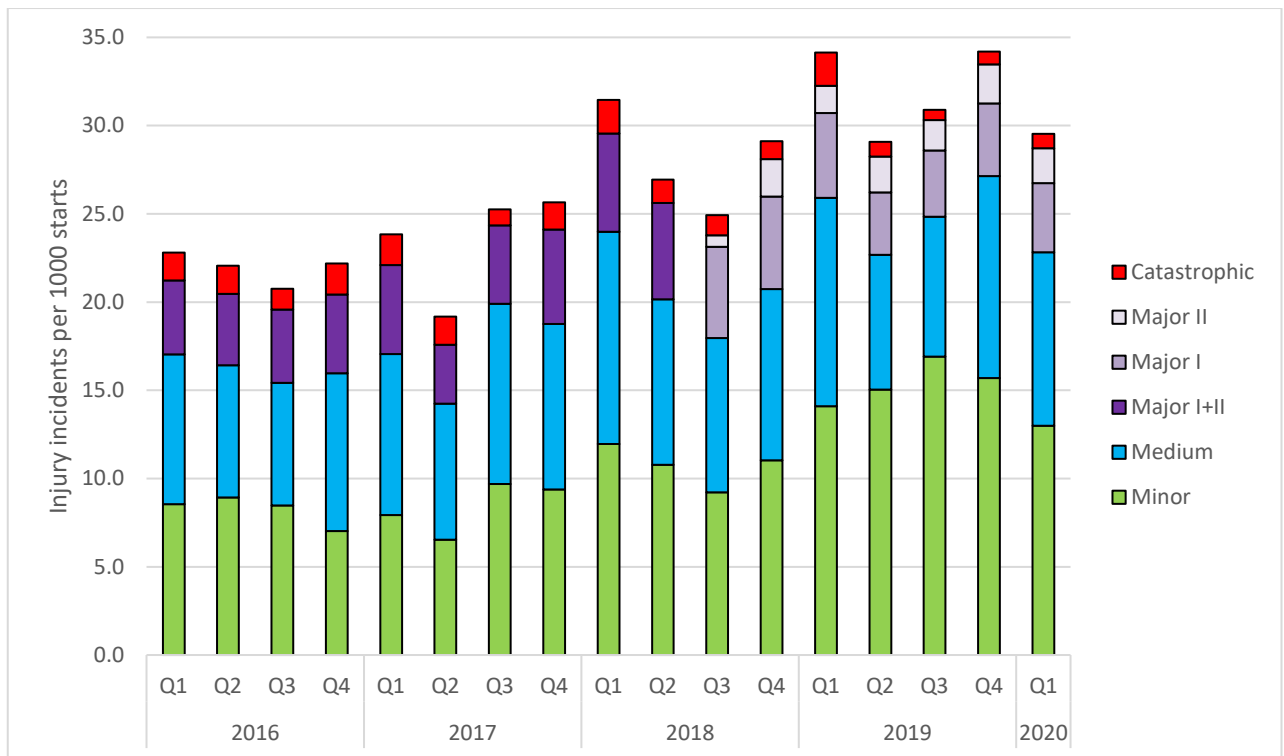
Minor injuries this quarter (13.0 per 1,000 starts) have decreased from 14.1 per 1,000 starts in Q1 of 2019 despite the recalibration of reporting of minor injuries.

Medium injuries have decreased from 12.0 per 1,000 starts in Q1 of 2018; to 11.8 per 1,000 starts in Q1 of 2019; to 9.8 per 1,000 starts this quarter. This trend of decreased Medium injuries, mostly muscle injuries, may be due to the improvements made to preparation of consistent racing surfaces and enhanced track design measures as well as the general fitness of racing greyhounds.

Major I + II injuries have also decreased, reported as 6.3 per 1,000 starts in Q1 of 2019 and decreasing slightly to 5.9 per 1,000 starts during Q1 of 2020; which is a slight increase on the 5.6 per 1000 starts reported in Q1 of 2018. The significant decrease in Catastrophic injuries has seen a concomitant rise in Major II injuries.

Catastrophic injuries have decreased significantly from 1.9 per 1,000 starts in Q1 of 2018 and 2019 to 0.8 per 1,000 starts in Q1 of 2020. This is consistent with the previous two quarters (Q3 and Q4 of 2019), which were the lowest catastrophic injury rates since reporting began in 2016.

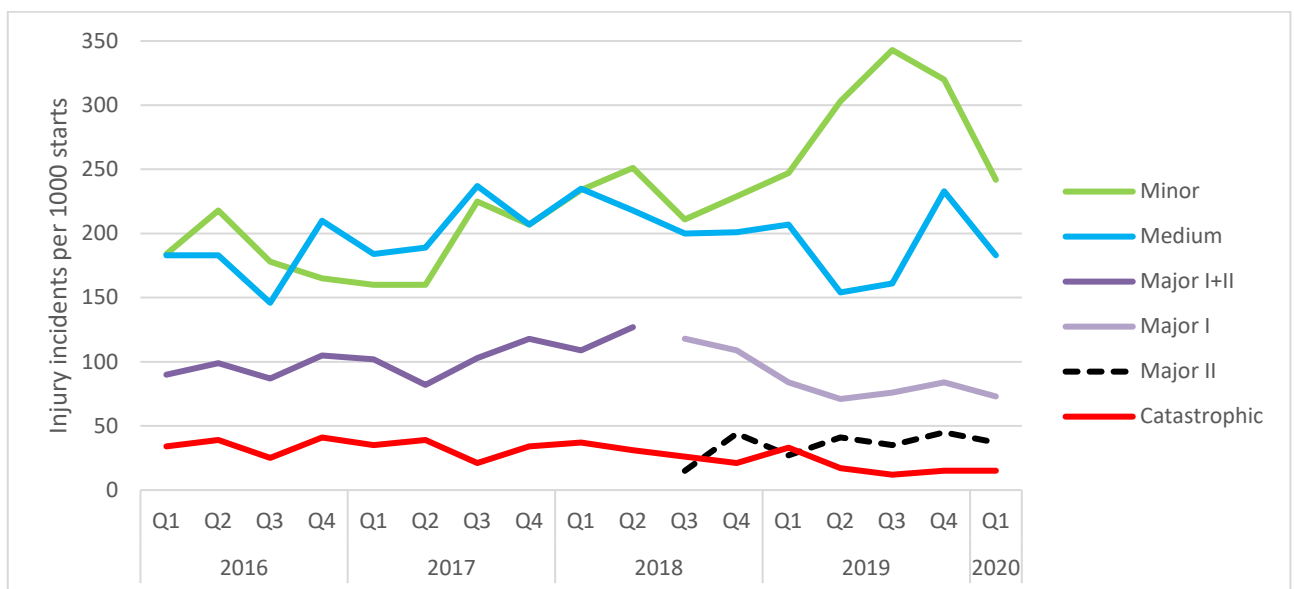
Trends in injury rates since the start of 2016 are shown in Figures 1 and 2.



**Figure 1: Injury trends by year quarters since 2016**

\*Note these figures may vary from previously reported figures to account for the exclusion of the Minor I category.

\*Data before Q3 2018 is from GRNSW reports available at <http://www.grnsw.com.au/welfare/veterinary/injury-report>. Data reported since the Commission commenced on 1 July 2018 contains injuries at both non-TAB and TAB races.



**Figure 2: Trends in injury category by year quarters since 2016**

\*Note these figures may vary from previously reported figures to account for the exclusion of the Minor I category.

## Injuries by severity

The largest proportion of injuries in this quarter were Minor (44%), followed by Medium (33.2%) and Major I (13.2%). Likely recoverable injuries (Minor, Medium, Major I) made up 90.5% of all greyhound injuries during this quarter. Injuries which were serious in nature, career ending or required surgery and further treatment and rehabilitation (Major II) made up 6.8% of all reported injuries this quarter and together with catastrophic injuries, made up 9.5% of all injuries. Injuries which required an incapacitation of 21 days or less (Minor + Medium) made up 77.2% of this quarter's injuries. The average proportion of recoverable injuries and serious injuries during each calendar year is summarised below (Table 4).

**Table 4: Comparison of the proportion of recoverable injuries versus serious injuries per year since 2018:**

Injury Type	2018	2019	Q1 2020
Likely Recoverable Injuries (Minor* + Medium + Major I)	92.8%	91.0%	90.5%
Serious Injuries (Major II + Catastrophic)	7.2%	9.0%	9.5%

\*Note these figures may vary from previously reported figures to account for the exclusion of the Minor I category.

The Major II and Catastrophic injuries occurring during this period were reviewed by the Race Injury Review Panel as it continued its work analysing contributing factors to Major II and Catastrophic race injuries.

The Panel continues to study all the contributing factors of Major II and Catastrophic injuries and, over time, the data collected will assist in informing prevention strategies and regulatory steps to minimise the incidence of racing injuries.

## Fatalities

A fatality is defined as a greyhound which is euthanased at a race meeting as a result of an injury sustained during the meeting, or any sudden death occurring during the race meeting. These fatalities are classified as Catastrophic injuries.

Of the 15 greyhound fatalities during this quarter, all were euthanased as a result of catastrophic injuries sustained during racing. There were no instances of sudden death occurring at a racecourse after the completion of a race.

Twelve fatalities occurred at TAB tracks and three at a non-TAB track, representing a total catastrophic injury rate of 0.8 per 1,000 race starts, a decrease in comparison with the equivalent quarter in 2018 (1.9 per 1000 starts); and Q1 2019 (1.9 per 1,000 starts).

Three greyhounds that were categorised by OTVs as having sustained a Major II injury (>42 days incapacitation) were subsequently reported to the Commission as having been euthanised by a private veterinarian following further diagnostics and treatment. These fatalities are not included in the reported statistics for Catastrophic injuries in Table 2.

The race injury treatment scheme, which was introduced at the end of March 2019, provides financial support for the off-track diagnosis and treatment of serious injuries which occur during racing, thereby eliminating unnecessary euthanasia of injured greyhounds due to the financial commitments associated with surgery and on-going treatment of greyhounds with serious injuries.

No greyhounds were reported as having been euthanased as a result of injuries sustained during unofficial club trials. No post-mortems were conducted on euthanased greyhounds.